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| 10/004,770 | 12/04/2001 | Indra Laksono | 1459-VIXS032 | 7929 |
| 29331 | 7590 | 08/21/2007 | EXAMINER | |
| LARSON NEWMAN ABEL POLANSKY & WHITE, LLP | | | HUYNH, SON P | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 10/004,770 | Applicant(s) LAKSONO ET AL. | |
| | Examiner Son P. Huynh | Art Unit 2623 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007 and 12 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22, 27, 50-62 and 67 is/are pending in the application.
- 4a) Of the above claim(s) 23-26, 28-49, 63-66, 68 and 69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>8/22/05; 2/02/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group 4/Figure 4 to which at least claims 1, 2, 6-13 are directed and provisionally withdraw claims directed to the non-elected groups in the reply filed on July 23, 2007 is acknowledged. The traversal is on the ground(s) that at least Figures 3-10 describes examples of the same inventive concept, to which at least claims 1-30 are directed and claims 50-69 recites a system having features very similar to the features recited by claim 1 and its dependents. This is not found persuasive because at least claims 23, 28, 63, 68 and their dependent claims are directed to non-elected figure 8.

The requirement is still deemed proper and is therefore made FINAL.

Claims 23-26, 28-49, 63-66, 68-69 are withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2, 5-12, 14-22, 27, 50-55, 57-62, and 67 are rejected under 35

U.S.C. 102(e) as being anticipated by Boyle (US 6,453,115 B1).

Regarding claim 1, Boyle discloses a method comprising the steps of:

receiving video data, the video data including a plurality of frames having a first presentation sequence (e.g., receiving video stream including a plurality of I frames, B frames, and/or P frames having a normal play – see include, but are not limited to, figures 1-2, 7, col. 5, lines 21-48);

generating a frame index, wherein the frame index includes a plurality of frame index entries corresponding to the plurality of frames (e.g., generating a frame index includes a plurality of index entries corresponding to the plurality of I frames, B frames, P frames, – see include, but are not limited to, figures 1-4, col. 5, line 62-col. 6, line 21, col. 7, line 1-col. 8, line 19, col. 10, lines 54-67);

determining using the frame index a subset of frames of the plurality of frames based on a second presentation sequence (e.g., determining using the frame index a subset of frames including I frame(s) B frames, and/or B frames based presentation sequence in TrickPlay mode – see include, but are not limited to, figure 7, col. 2, lines

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24-65, col. 3, lines 20-37, col. 6, line 37-58, col. 10, lines 1-26, lines 54-67, col. 12, lines 20-60);

providing the each frame of subset of frames to a display client based on the second presentation sequence (providing frames to a display client based on the presentation sequence according to TrickPlay mode – see include, but are not limited to, figures 1, 7, col. 12, lines 19-60, col. 13, lines 20-49).

Regarding claim 2, Boyle discloses the method as discussed in the rejection of claim 1. Boyle further discloses the second presentation sequence is based on the received presentation request (presentation sequence in TrickPlay mode is displayed based on user input signal from user via an input, such as a keyboard or a graphical user interface, so as when TrickPlay has been activated by the user – see include, but are not limited to, col. 12, lines 19-32, col. 13, lines 20-24).

Regarding claim 5, Boyle discloses the method as discussed in the rejection of claim 2. Boyle further discloses the presentation request is received from a display client over a network (e.g., network communication between user input device and the display client – see include, but are not limited to, col. 12, lines 20-32).

Regarding claims 6-7, Boyle discloses the method as discussed in the rejection of claim 1. Boyle further discloses the video data includes video data encoded MPEG video data (see include, but are not limited to, 4, lines 60-67, col. 5, lines 20-34).

Regarding claim 8, Boyle discloses the method as discussed in the rejection of claim 1. Boyle further discloses the frame index is generated based on the storage of the representation of the video data in the database (e.g., frame index is generated based on the storage of the presentation of the video data in video stream buffer system, storage subsystem – see include, but are not limited to, figures 1-2, 4, col. 3, lines 20-38).

Regarding claim 9, Boyle discloses the method as discussed in the rejection of claim 1. Boyle further discloses the frame index is generated based on the storage of the video data at the video source (see include, but are not limited to, figures 1-2, 4, col. 3, lines 20-38, col. 4, line 58-col. 5, line 34, col. 6, lines 50-67).

Regarding claim 10, Boyle discloses the method as discussed in the rejection of claim 1. Boyle further discloses each frame index entry of the plurality of frame index entries includes a frame order value based on a location of the associated frame within the received sequence of the plurality of frames (frame order for I frame, B frame, P frame, etc. see include, but are not limited to, figures 2, 3, 6, col. 5, lines 21-34, col. 6, lines 3-13).

Regarding claim 11, Boyle discloses the method as discussed in the rejection of claim 1. Boyle further discloses each frame index entry of the plurality of frame index entries

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includes frame type value based on a frame type selected from a group consisting of: an intracoded frame, a forward predicted frame, and a bi-directional predicted frame (e.g., the frame type selected from a group consisting of I frame, P frame, B frame – see include, but are not limited to, figures 2,4,6, col. 5, lines 21-41, col. 6, lines 3-21, col. 7, line 66-col. 8, line 8, col. 10, lines 54-67).

Regarding claim 12, Boyle discloses the method as discussed in the rejection of claim 1. Boyle further discloses each frame index entry of the plurality of frame index entries includes a frame offset value (e.g., offset 144) based on a offset from a first storage location of a start of a stored data representing a corresponding frame of the plurality of frames (see include, but are not limited to, figure 6, col. 7, lines 11-21, col. 9, line 66-15, col. 11, lines 12-27).

Regarding claim 14, Boyle discloses the method as discussed in the rejection of claim 1. Boyle further discloses the first presentation sequence includes a normal forward presentation and the second presentation sequence includes a fast forward presentation (see include, but are not limited to, figure 7, col. 11, line 55-col. 12, line 32, col. 13, lines 20-58).

Regarding claim 15, Boyle discloses the method as discussed in the rejection of claim 14. Boyle further discloses determining the subset of frames includes identifying at least

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one intracoded frame (I frame) of the plurality of frames using the frame index – see include, but are not limited to, figures 6-7, col. 12, line 32-col. 13, line 58).

Regarding claim 16, Boyle discloses the method as discussed in the rejection of claim 15. Boyle further discloses a presentation of the at least one intracoded frame (I frame) included in the subset of frames is based on a desired fast forward presentation rate (see include, but are not limited to, figures 6-7, col. 12, line 32-col. 13, line 58, wherein the desired fast forward rate is broadly interpreted as fast forward rate).

Regarding claim 17, Boyle discloses the method as discussed in the rejection of claim 14. Boyle further discloses determining the subset of frames includes identifying at least one intracoded (I frame) and at least one forward predicted frame (P frame) of the plurality of frames using the frame index (see include, but are not limited to, col. 13, lines 25-58).

Regarding claim 18, Boyle discloses the method as discussed in the rejection of claim 17. Boyle further discloses a presentation of the at least one intracoded frame (I frame) and at least one forward predicted frames (P frame) included in the subset of frames is based on a desired fast forward presentation rate (see include, but are not limited to, figures 6-7, col. 12, line 32-col. 13, line 58).

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Regarding claim 19, Boyle discloses the method as discussed in the rejection of claim

1. Boyle further discloses the first presentation sequence includes a normal forward presentation and the second presentation sequence includes a fast reverse presentation (including fast reverse and skip reverse TrickPlay modes -see include, but are not limited to, figure 7, col. 11, line 55-col. 12, line 32, col. 13, lines 20-58).

Regarding claim 20, Boyle discloses the method as discussed in the rejection of claim

19. Boyle further discloses determining the subset of frames includes identifying at least one intracoded frame (I frame) of the plurality of frames using the frame index – see include, but are not limited to, figures 6-7, col. 12, line 32-col. 13, line 58).

Regarding claim 21, Boyle discloses the method as discussed in the rejection of claim

20. Boyle further discloses the display controls determines a TrickPlay mode (e.g., skip reverse or fast reverse mode), the display controller determines the LBA of the start of the sequence header, determines I frame 103 that corresponds to the skip/ fast reverse location selected by the user, and retrieves frames correspond to the selected reverse TrickPlay mode to display (see include, but are not limited to, figures 6-7, col. 12, line 32-col. 13, line 58). Inherently, the method includes providing the subset of frames in a reverse order compared to a forward order of the first presentation sequence so that only frames correspond to the reverse order is retrieved and displayed in response to reverse TrickPlay mode.

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Regarding claim 22, Boyle discloses the method as discussed in the rejection of claim 20. Boyle further discloses when fast reverse TrickPlay mode (including skip reverse and fast reverse) is activated, corresponding number of frame(s) are retrieved for display according to selected TrickPlay mode (see include, but are not limited to, figures 6-7, col. 12, line 32-col. 13, line 58). Inherently, a number of intracoded frames included in the subset of frames is based on a desired fast reverse presentation rate so that a predetermined number of I frames are provided according to the selected fast reverse mode (for example, number of I frame selected in skip reverse mode is less than the number of I frame in normal reverse or other fast reverse mode).

Regarding claim 27, Boyle discloses the method as discussed in the rejection of claim 1. Boyle further discloses the first presentation sequence includes a normal forward presentation rate (normal play rate) and the second presentation sequence includes a reverse presentation rate (e.g., fast reverse mode rate) – see include, but are not limited to, figure 7, col. 12, line 32-col. 13, line 58).

Regarding claim 50, the limitations of the system correspond to the limitations of the method of claim 1, and are analyzed as discussed with respect to the rejection of claim 1, wherein “an input interface” is read on interface that receives video stream and output the video stream to video stream buffer system; “a recording module” is read on video stream buffer system and/or storage subsystem; “a presentation control” is read on display controller (figures 1-2).

Regarding claim 51, Boyle further discloses the system comprises an output interface (e.g., video stream decoder) having an input coupled to the output of the presentation control, the output interface to provide the subset of frames to a display client based on the second presentation sequence (see include, but are not limited to, figures 1-2).

Regarding claims 52-55, 57-62, 67, the additional limitations of the system as claimed correspond to the additional limitations of the method as claims in claims 8, 10-12, 14-16, 19-21, and are analyzed as discussed in the rejection of claims 8, 10-12, 14-16, 19-21.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-4, 13 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyle as applied to claim 1 or claim 50 above.

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Regarding claims 3-4, Boyle discloses a method as discussed in the rejection of claim 2. Boyle further discloses the user input signal is received via an user input such as a keyboard or a graphical user interface (see include, but are not limited to, col. 12, lines 19-27). However, Boyle does not explicitly disclose the presentation request is received from display client or from a remote control device based on an input from a user of the display client. Official Notice is taken that receiving presentation request from the display client or from a remote control device based on an input from a user of the display client is well known in the art. For example, presentation request is received via touch screen or via a remote control device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Boyle with the well known teaching of receiving request from display client or remote control in order to improve convenience for user.

Regarding claim 13, Boyle discloses the method as discussed in the rejection of claim 1. However, Boyle does not explicitly disclose the frame index entries include a frame size value based on a size of a stored data representing a corresponding frame of the plurality of frames. Official Notice is taken that including frame size value in frame index entries is well known in the art. For example, including information about the size of I frames or order frames in the frame index. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Boyle with the well-known teaching of including frame size information in the frame index entries in order to improve efficiency in determining memory space for the frame.

Regarding claim 56, the additional limitations of the system correspond to the additional limitations of the method of claim 13, and are analyzed as discussed with respect to the rejection of claim 13.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Green et al. (US 2002/0168175 A1) discloses system and methods for playing digital video in reverse and fast forward modes comprise index includes frame size, frame storage location (see abstract).

Gupta et al. (US 2005/0086703 A1) discloses skimming continuous multimedia content.

Weaver et al. (US 6,119,154) discloses method and apparatus for non-sequential access to an in progress video feed.

Rangan et al. (US 6,154,771) discloses real time receipt, decompression and play of compressed streaming video/hypervideo, with thumbnail display of fast scenes and with replay, hyperlinking and/or recording permissively initiated retrospectively.

Ellis et al. (US 2005/0028,208) discloses interactive television program guide with remote access.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P. Huynh whose telephone number is 571-272-7295. The examiner can normally be reached on 9:00 - 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Son P. Huynh

August 16, 2007

A handwritten signature in black ink, appearing to read 'SPH' or similar, with a horizontal line underneath.